

BALLAST WATER TECHNOLOGY DEMONSTRATION PROGRAM PROJECTS

YEAR	PI	Title	Technology
1998	Jensen	Ballast water treatment using peracetic acid	Peracetic acid
1998	Wright	An Investigative Assessment of Excimer UV as a Method of Shipboard or Dock-Side Treatment	Ultraviolet, Filtration
1998	Ruiz/Hines	Measuring the Transfer, Dynamics, and Risk of Invasion for Microbial Communities Associated with Ballast Water of Ships	Microorganisms
1998	Bourke	Development of a Shipboard Ultrasonic Ballast Water Organism Control System	Acoustic
1999	Ruiz	Experimental Analysis of Ballast Water Exchange	Exchange
1999	Cohen	Assessment of On-Shore Ballast Water Treatment	Onshore Treatment
1999	Maddox	Ballast Water Treatment and Management	Ozone, Acoustic
1999	Baier	Testing Biofilm Monitoring Systems for Risk Assessment of Harmful Introductions by Ships from European to North American Waters	Microorganisms
1999	Dobbs	Inactivation of Human Pathogens Through Photon Engineering	Ultraviolet, Filtration
1999	Parsons	Critical Fluid Systems Design Issues Associated with Automatic Backwash Ballast Water Filtration...	Filtration, Hydrocyclone
1999	Ruiz/Dobbs	Presence, Dynamics, and Fate of Pathogenic Microorganisms in Ballast Water and Ballast Microcosms	Microorganisms
1999	Wright	Ballast Treatment and Management: Development of an Environmentally Friendly Treatment for Ballast Water	Juglone, Menadione
1999	Rogers	Electrochemically Generated Ozone for On-Board Control of Nonindigenous Invasive Species in Ballast Water	Ozone
2000	Falkner	West Coast Regional Applied Ballast Management Research and Demonstration Project	Exchange, Onshore Treatment
2000	Herwig	Ballast Water Monitoring and Treatment	Exchange, Microorganisms
2000	Cangelosi	Demonstration and Evaluation of Primary and Secondary Ballast Water Treatment Combinations	Filtration, Hydrocyclone, Ultraviolet
2000	Wright	Shipboard Trial of Primary and Secondary Ballast Water Treatment Systems	Hydroyclone, Ultraviolet, Peracetic Acid, Menadione
2000	Landrum	Disinfection of Ballast Water with Chemical Disinfectants	Chlorine, Glutaraldehyde, Menadione
2000	Jenkins	A Project to determine the impact of mud sediment accumulation in ballast water tanks on invasion of the Great Lakes by ANS	NOBOB
2000	Sansalone	A Screening Assessment of Dissolved Air Flotation for Control of Nonindigenous Invasive Species in Ballast Water	Onshore treatment
2001	Cooper	Control and Mitigation: Ozone Treatment of Ballast Water	Ozone
2001	Drake	Aquatic Nuisance Species: Abundance of Microorganisms and Pathogens Associated with Biofilms inside Ballast-water Tanks and their capacity to act as vertical seedbank	Microorganisms
2001	Dobbs	Ballast residuals in NOBOB vessels in Ches. Bay. Biological and chemical characterization and a comparison with Great Lakes patterns	Microorganisms, NOBOB
2001	Parsons	BW treatment and management: a paradigm shift in ballasting: the possibility of a ballast-free ship	Redesign of ships or tanks
2001	Reid	Ballast residuals in NOBOB vessels in Great Lakes	Exchange, NOBOB

2002	Mann	Shipboard demonstration of Aquahabistat (deoxygenation)	Depressurization
2002	Jacobs, Rachel	Engineering for feasibility study on thermal treatment of ballast water	Thermal
2002	Reid, David	Computational modeling of ballast tanks to improve understanding and maximize effectiveness of management practices and treatment systems	Exchange
2002	Tamburri, Mario	A Chesapeake Bay evaluation of deoxygenation as a ballast water treatment to prevent aquatic invasions	Deoxygenation
2002	Landrum, Peter	Assessing ecological risks posed by a ballast water disinfectant	Gluteraldehyde
2002	Peters, Robert	Treatment of ballast water using acoustic cavitation techniques coupled with advanced oxidants	Ozone, Other Oxidants, Acoustic
2002	Wright, David	Combination technologies for BWT	Menadione, Filtration, Ultraviolet
2002	Stocks, David	Treatment of the NOBOB ship using heat	Thermal
2002	Maddox, Tom	Improved methods for onboard ballast water treatment and management using filtration, ozone and sonics	Ozone, Filtration, Acoustic
2002	Parsons, Michael	Computational fluid dynamics study of BWE effectiveness and improved ballast tank designs	Exchange, Redesign of ships or tanks